

DOCUMENT-IDENTIFIER: US 5987050 A

TITLE: Laser transmitter based on a coupler and having a controlled output port

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In accordance with the present invention, a laser transmitter based on a star coupler includes a separate controlled output port. An interferometric modulator (e.g., a Mach-Zehnder modulator) is incorporated ~~inside~~ a laser cavity by means of a star coupler and enables pulse switch control and data encoding of the laser signal, independent of the means of wavelength selection used to determine the frequency of the laser.

United States Patent [12]

Doerr et al.

[21] Patent Number 5,987,050

[45] Date of Patent Nov. 16, 1999

[54] LASER TRANSMITTER BASED ON A COUPLER AND HAVING A CONTROLLED OUTPUT PORT

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[21] Appl. No. 08/142,760

[22] Filed Nov. 16, 1998

[31] Int. Cl. 1019 4/08

[52] U.S. Cl. 372/108, 372/50, 372/26

363/140, 363/142, 385/24, 385/37

[33] Field of Search 372/25, 38, 28, 315/140, 14, 16, 27

372/26, 48, 58, 315/140, 14, 16, 27

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12. (14) (mach adj zehnder) with (between or inside or inbetween) with (cavity or fabry\$ or etalon)

16. (16) (mach adj ze\$) with (between or inside or inbetween) with (cavity or fabry\$ or etalon)

(5944) (cavity or fabry\$ or etalon) with switch

(14890) switch with inside

((676) ((cavity or fabry\$ or etalon) with switch) and (switch with inside)

((79) (((cavity or fabry\$ or etalon) with switch) and (switch with inside)) and (fiber or waveguide)

(1) 5987050.UREN.

(5) ("5136671" | "5412744" | "5524014" | "5875272" | "5881199").PN.

Variable optical filter unit and variable gain equalizing

Tunable semiconductor laser having cavity with

Optical interleaver/de-interleaver

Laser assembly

Optical transmission system

Laser transmitter based on a coupler and having a

Rosette-type optical microsystem of strain gauges

Fiber optic strain sensor and read-out system

Asymmetric Y-branch optical device

Tunable semiconductor laser

Bulk optic wavelength division multiplexer

385/39
385/11;
385/33

372/20
372/50

385/24
356/491;
356/519;

372/6
359/341.33;
359/342;

359/337.5
359/161;
359/188

372/108
372/26;
372/98;

356/32
250/227.14;
250/227.16;

356/477
356/480;
385/12

385/45
359/340;
359/344;

372/97
372/102;
385/130

385/49
359/290;
359/629;

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Andrews, Jeffrey
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Dutting, Kaspar
McMahon, Donald

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- L3: (1468) switch with (between or inside or inbetween) with (cavity or fabry\$)
- L4: (173) 3 and fiber
- L5: (80) 3 and waveguide
- L6: (209) 4 or 5
- L8: (221) 2 or 6

Failed

- (16) (mach adj zeS) with (between or inside or inbetween) with (cavity or fabry\$)

Saved

- (5944) (cavity or fabry\$ or etalon) with switch
- (14890) switch with inside
- (676) ((cavity or fabry\$ or etalon) with switch) and (switch with inside)
- (79) (((cavity or fabry\$ or etalon) with switch) and (switch with inside)) and
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